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State of Utah

Department of Natural Resources

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March 20, 2006

Dennis Ware, Controller
Castle Gate Holding Company
P.O. Box 30
Helper, Utah 84526-0030

Subject: Approval of Phase I Bond Releases (Sowbelly Gulch Substation and Hardscrabble Substation at the Castle Gate Mine) Conditional Approval of Phase I Bond Releases (Adit #1 at the Castle Gate Mine and Gravel Canyon at the Willow Creek Mine), Castle Gate Mine, Castle Gate Holding Company, C/007/0004, Willow Creek Mine, Plateau Mining Corporation, C/007/0038 Outgoing File

Dear Mr. Ware:

Phase I bond releases at the Castle Gate Mine for the Sowbelly Gulch Substation and Hardscrabble Substation are approved. Conditional approval is granted for Adit #1 at the Castle Gate Mine and Gravel Canyon at the Willow Creek Mine pending receipt of five clean copies for incorporation. OSM concurred with these bond releases on March 9, 2006.

The amounts to be released at the Castle Gate Mine are:

Sowbelly Gulch Substation	1.80 acres	$65,000
Hardscrabble Substation	0.72 acres	$51,000
Adit #1	3.00 acres	$74,054

The total phase I bond release for Castle Gate Mine at these three sites is: ***$190,054 for 5.52 acres.***
The current bond amount for the Castle Gate Mine is $680,154. The amount of bond proposed for phase I bond release at the Castle Gate Mine is $190,054.
Therefore, ***$490,000 would remain for the Castle Gate Mine bond.***

The other is for Gravel Canyon at the Willow Creek Mine.

Gravel Canyon	5.75 acres	$95,400

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*The amount to be **released is $95,400** and the amount to be **retained is $63,600** for Gravel Canyon. The bond amount for Willow Creek Mine is currently $7,866,000 and would be **reduced to $7,770,600** with this phase I bond release.*

If you have any questions, please call Pamela Grubaugh-Littig at (801) 538-5268.

Sincerely,

John R. Baza
Director

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State of Utah

Utah Oil Gas and Mining

Coal Regulatory Program

Castle Gate Holding Company
Castle Gate Mine
Phase I Bond Release Adit Number 1
C/007/0004, Task # 2244
Technical Analysis
February 15, 2006

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TECHNICAL ANALYSIS DESCRPTION

The Division ensures that coal mining and reclamation operations in the State of Utah are consistent with the Coal Mining Reclamation Act of 1979 (Utah Code Annotated 40-10) and the Surface Mining Control and Reclamation Act of 1977 (Public Law 95-87). The Utah R645 Coal Mining Rules are the procedures to implement the Act. The Division reviews each permit or application for permit change, renewal, transfer, assignment, or sale of permit right for conformance to the R645-Coal Mining Rules. The Applicant/Permittee must comply with all the minimum regulatory requirements as established by the R645 Coal Mining Rules.

The regulatory requirements for obtaining a Utah Coal Mining Permit are included in the section headings of the Technical Analysis (TA) for reference. A complete and current copy of the coal rules can be found at http://ogm.utah.gov

The Division writes a TA as part of the review process. The TA is organized into section headings following the organization of the R645-Coal Mining Rules. The Division analyzes each section and writes findings to indicate whether or not the application is in compliance with the requirements of that section of the R645-Coal Mining Rules.

When review of an application results in findings of noncompliance with the R645-Coal Mining Rules, the Division discusses the deficiencies in the analysis sections and cites regulatory references for the deficiencies in the findings sections of the Draft TA. The regulatory references cited describe the minimum requirements for meeting the R645-Coal Mining Rules and obtaining a permit.

RECLAMATION PLAN

GENERAL REQUIREMENTS

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

Analysis:

On May 5, 2005, the Division received a request for Phase I bond release from Foundation Coal Company for the Adit No. 1 area of the Castle Gate Mine. The Permittee completed reclamation of the area in the fall of 2002.

The Permittee described the Adit No. 1 reclamation plan in Appendix 3-2 of the MRP. The pre-SMCRA disturbed area measured 3.0 acres, of which 1.5 acres the Permittee reclaimed in the fall of 2002.

The Division determined that they can release $70,054 from the bond. The bond after Phase I bond release will be $59,000, which is enough to ensure that the Division can reclaim the site in the event of bond forfeiture.

Findings:

The Permittee met the general reclamation requirements.

APPROXIMATE ORIGINAL CONTOUR RESTORATION

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

Analysis:

The Permittee demonstrated that the site meets the approximate original contour requires. The requirements to achieve approximate original contour restoration are a combination of performance standards for backfilling and grading, hydrology, postmining land use and revegetation. The performance standards include:

- Off-site impacts are minimized.
- The final surface configuration closely resembles the general surface configuration of the land before mining.
- The topsoil/growth media are adequate to support the vegetation requirements.
- Erosion is minimized.
- The land is able to support the approved postmining land use.

The intent of the approximate original contour regulations is not to restore a site to the approximate premining elevation. Rather the intention of the regulations is to ensure that the reclaimed site has slope lengths and gradients that are within acceptable limits.

The main criterion that the Division uses to determine if the site meets the AOC requirements is whether the postmining topography, excluding elevation, closely resembles its premining configuration. The Permittee must achieved the following regulatory requirements:

- Eliminate all highwalls. The highwalls were backfilled and graded. The concrete brows over the portal entrances were left for historical references.
- Eliminate all spoil piles (none at this site).
- Eliminate all depressions with the exception of small depressions needed to retain moisture, minimize erosion, create and enhance wildlife habitat or assist revegetation.
- All slopes will have a static safety factor of 1.3 or greater and not exceed the angle of repose.
- Minimize erosion and water pollution both on and off site.
- Support the postmining land use.

As-Built Reclamation Topography and Cross-section Location Maps are Exhibit 3.5-5AB and Exhibit 3.5-6AB and Exhibit 3.5-7AB. The Permittee met the minimum requirements for achieving AOC because:

- There are no depressions at the site except for small depressions (pocks). The pocks are part of a standard surface roughening methods used to control erosion and subsequent water pollution.
- The slopes have a static safety factor of 1.3 or greater and the slope angles are less than the angle of repose.
- The reclaimed site is expected to support the postmining land use of grazing and wildlife habitat, because the slope configuration blends with the surrounding area.

Findings:

The information provided in the bond release package meets the minimum requirements of the approximate original contour requirements.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

General

The Permittee met the general backfilling and grading requirements, including static safety factor and approximate original contour, see the Approximate Original Contour section of the TA for explanation. See Exhibit 3.5-5AB and Exhibit 3.5-6AB and Exhibit 3.5-7AB.

The site meets the backfilling and grading requirements because:

- The Permittee reclaimed the area to the approximate original contour requirements. See the Approximate Original Contour section of the TA for details.
- The Permittee reclaimed the highwalls.
- There are no spoil piles at the site so those regulations are not relevant.
- There are no depressions at the site except pocks used to control erosion.
- The reclaimed slopes have a safety factor of 1.3 or greater and do not exceed the angle of repose. Exhibit 3.5-5AB and Exhibit 3.5-6AB and Exhibit 3.5-7AB.
- The Permittee reclaimed the site using surface roughening techniques (pocking). Pocking is an effective means to control erosion and water pollution.
- The reclaimed site will support the postmining land use of grazing and wildlife habitat because the Permittee graded the slope so that it would blend into surrounding area and vegetated the slope with an approved seed mix.

No small depressions or impoundments of any kind will be retained after final reclamation.

Previously Mined Areas

Pre-SMCRA mining disturbed the site. The R645 rules allow the Division to enforce different standards if highwalls or spoil piles are present. Those rules apply if there is

insufficient material to completely backfill the highwalls. The Division found that there was sufficient material to completely backfill the highwalls so those rules do not apply.

Findings:

The information provided in the bond release package meets the minimum requirements of the backfilling and grading requirements.

MINE OPENINGS

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Analysis:

The Permittee met the requirements for sealing all mine openings at the Adit No. 1 site. All mine openings were sealed and backfilled in accordance with MSHA and Division standards.

Findings:

The information provided in the bond release package meets the minimum requirements of the mine openings requirements.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Redistribution

The site met the minimum topsoil and subsoil requirements for Phase I Bond release. The Permittee met those requirements by showing the post mining topography on Exhibit 3.5-3. Associated cross-sections are illustrated on Plate 3.5-3B. Table 3.5-7 provides a mass balance summary. There were 4,878 cu yds of material moved during regrading. The Division staff visited the site on September 8, 2004. Coal waste, asphalt, concrete and steel remain buried beneath four feet of clean fill (page 3.5-10).

This pre-SMCRA site was reclaimed using the best available material from within the disturbed area. The characteristics of the surface soils are provided in Appendix 3G.

The ephemeral channel was covered with three inches of soil and seeded and mulched as described on page 3.5-15 and Section 3.5 Appendix 3.5C page 8.

Findings:

The information provided meets the minimum Topsoil and Subsoil requirements for Phase I bond release.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 701.5, 784.24, 817.150, 817.151; R645-100-200, -301-513, -301-521, -301-527, -301-534, -301-537, -301-732.

Analysis:

Reclamation

The approved reclamation plan calls for the reclamation of all roads associated with Adit No. 1. The Permittee reclaimed all roads within the disturbed area boundaries.

Findings:

The information provided in the bond release package meets the minimum requirements of the road systems and other transportation facilities requirements.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

Analysis:

Hydrologic Reclamation Plan

The Permittee met the requirements of R645-301-731 by demonstrating with maps and descriptions, how they meet the relevant hydrology requirements for Phase I Bond release. Their plan is specific to the local hydrologic conditions, and contains the steps the Permittee took during coal mining and reclamation operations, through bond release, to:

- Minimize disturbance to the hydrologic balance within the permit and adjacent areas.
- Prevent material damage outside the permit area.
- Support approved post mining land use in accordance with the terms and conditions of the approved permit and performance standards of R645-301-750.
- Comply with the Clean Water Act (33 U.S.C. 1251 et seq.)
- Meet applicable federal and Utah water quality laws and regulations.

The plan also includes the measures the Permittee will take to:

- Avoid acid or toxic drainage.
- Prevent, to the extent possible (using the best technology currently available.) additional contributions of suspended solids to stream flows.
- Provide water treatment facilities when needed.
- Control drainage.

The plan specifically addresses any potential adverse hydrologic consequences identified in the PHC, and includes preventative and remedial measures.

The Division has not required additional preventative, remedial or monitoring measures to assure that material damage to the hydrologic balance outside the permit area is prevented.

The following sections of this technical memo discuss the specific ways in which the Permittee has met the regulations, as they pertain to the application.

Gravity Discharges From Underground Mines

A spring located approximately 200 feet into the mine at Adit No. 1 discharges approximately 3 gallons of water per minute. This discharge is carried beneath the backfill and out of the mine by a pipe, then through a diversion to the Price River.

The Permittee has met the requirements of R645-301-731.521 because the flow from Adit No. 1 pre-dates SMCRA (Section 3.5-3(1)). The Division allows the discharge since the Permittee has demonstrated that the untreated discharge complies with the performance standards of R645-301 and R645-302 (Figure 3.5-2, point BM-30 in the Division's Water Quality Database). The Utah Division of Water Quality (DWQ) does not require a UPDES permit for this discharge (Figure 3.5-1).

Diversions: Miscellaneous Flows

The Permittee met the requirements of R645-301-742.330 and subsections by designing all permanent diversions for the ephemeral flows in the Adit No. 1 area to safely pass the runoff

from a 10-year, 6-hour precipitation event. They present all design calculations and other pertinent information in Section 3.5-4(2)AB, Table 3.5-5AB, and Attachment 1.

The diversions to remain in the Adit No. 1 area are:

Name	Diversion Type	Description	Collects flow from:	Flows to:
ARD-1A	channel	3.5-ft. wide 1-ft. deep erosion mat	AWS2	ARD-1B
ARD-2	channel	2.5-ft. wide 1.25-ft. deep erosion mat	AWS1	ARD-1B
ARD-1B	channel	3.5-ft. wide 1-ft. deep erosion mat	portal discharge AWS3 ARD-1A ARD-2	ARC-1
ARC-1	culvert	24-in. diameter	ARD-1B	ARBC-1
ARBC-1	box culvert	8-ft by 10-ft. box	ARC-1	ARD-3
ARD-3	channel	5-ft. wide 1-ft. deep rip-rap	ARBC-1	Price River

Sediment Control Measures

The Permittee met the requirements of R645-742 and relevant subsections by using the best technology currently available (BTCA) to prevent, to the extent possible, additional contributions of sediment to stream flow or to runoff outside the permit area, meet the applicable effluent limitations, and minimize erosion to the extent possible.

The sediment control measures the Permittee used include:

- Incorporation of hay and/or straw mulch into the soil.
- Deep gouging.
- Seeding.
- Mulching after seeding.
- Chemically anchoring the final mulch layer.

Siltation Structures: Exemptions

The Adit No.1 area is exempt from the requirements of R645-301-763.100, under the provisions of R645-301-742.240; since the area is small and the Permittee has provided information in Appendix 3.5-D to show that the disturbed area, as reclaimed, will meet effluent limitations. Under 40 CFR 434.82, the effluent limitations are non-numeric and based on the Permittee's sediment control designs, and modeling to demonstrate that sediment loads will not be greater than for the undisturbed condition.

Findings:

The Permittee has met the minimum requirements of the Reclamation Plan: Hydrologic Information sections of the Regulations.

STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

Analysis:

The Permittee met the minimum stabilization of surface areas requirements for Phase I Bond release. The site was furrowed on the contour. Two T /ac. of hay was scattered on the regraded surface (page 3.5-13). The hay was incorporated with gouging (page 3.5-13 and 3.5-18). Seed was broadcast over the site (Table No. 1, Chap. 9). Following the seeding, the site received an additional 1 to 1.5 tons per acre of straw much applied with mechanical blowers (page 3.5-14) and then was sprayed with a hydromulch and tackifier at a rate of 500 lbs per acre. An erosion control mat was placed in the channel bottom (page 3.5-15 and Section 3.5 Appendix 3.5C page 8). The channel was seeded and mulched as well.

After seeding and mulching, App. 3.5-D demonstrates that the amount of sediment estimated to leave the site is reduced to 0.2 Tons/acre/year. The field visit on September 4, 2005 confirmed that the Permittee has applied best management practices to control erosion and prevent sediments from leaving the site.

Findings:

The information provided in the application meet the minimum Stabilization of Surface Areas requirements for Phase I bond release.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Affected Area Boundary Maps

There was no change to the affected area boundary.

Bonded Area Map

There was no change to the bonded area.

Reclamation Backfilling And Grading Maps

The Permittee included as built maps and cross sections. See Exhibit 3.5-5AB and Exhibit 3.5-6AB and Exhibit 3.5-7AB.

The backfilling and grading maps are adequate to show that the Permittee meet the minimum backfilling and grading regulations including the approximate original contour requirements.

Reclamation Facilities Maps

There are no reclamation facilities associated with the substation area.

Final Surface Configuration Maps

The Permittee met the requirements of R645-301-542.300 by depicting the as-built final surface configuration for the Adit No. 1 area on Exhibit 3.5-5AB, and cross-sections of the final surface on Exhibit 3.5-7AB. No facilities will remain in the Gravel Canyon area as permanent features.

Reclamation Monitoring And Sampling Location Maps

Other than the road shown on Exhibit 3.3-19 in the MRP, there are no surface or subsurface manmade features at the substation site.

Certification Requirements.

The Permittee has met the requirements of R645-301-542.310, R645-301-731.720, and R645-301-512 by having a professional engineer certify Exhibits 3.5-5AB, 3.5-6AB, and 3.5-7AB.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

General

The Permittee address the general procedures for bond release as follows:

- The Permittee described the area for which Phase I bond release is being sought as approximately 3.0 of which 1.7 was disturbed post-SMCRA in NW1/4NW1/4 of Section 1, Township 13 South, Range 9 East, SLB&M, Utah. The substation area is shown on Exhibit 3.3-23 in the MRP, which was incorporated January 23, 2003.
- The Permittee showed when the work reclamation work was done.
- In the bond release package, the Permittee included a brief history of the mining and reclamation activities.
- There are no ponds within the substation area; sediment control was done with surface roughening techniques, such as pocking.

Determination of Bond Amount

The current bond for Adit No. 1 site is $129,054 in 2004 dollars. The Permittee requested bond release of $77,432 for the reclamation work done at the Adit No. 1.

R645-301-830.300 requires that the Division escalate the bond. In 2005, the Division escalated the bond by 1.2% for 5 years. The Division determined that the bond escalated to 2009 dollars would be $137,000.

R645-301-880.310, allows the Division to reduce the bond by up to 60% upon completion of Phase I bond release. The Permittee was seeking Phase I bond release on the entire disturbed area at Adit No. 1.

R645-301-830.200 requires that the bond be sufficient to assure that completion of reclamation by the Division in the event of bond forfeiture. After the Division grants Phase I bond release, the remaining work would consist of vegetating the site. The Division determined that the amount of bond needed to insure that they could complete vegetation is $51,622 in 2004 dollars. The Division escalated the costs to 2009 dollars and determined that the vegetation costs would be $55,000.

The Division determined the maximum amount of bond release that they could grant as follows:

- Current bond amount – revegetation amount in 2009 dollars = amount of bond release.
- $129,054 - $55,000 = $74,054.

The Division determined the minimum bond amount in $55,000 in 2009 dollars. Therefore, the Division can only release $74,054.

Findings:

The information provided in the bond release package meets the minimum requirements of the bonding and insurance requirements.

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State of Utah

Utah Oil Gas and Mining

Coal Regulatory Program

Willow Creek Mine
Gravel Canyon Phase I Bond Release
Permit #C/007/0038, Task ID #2243
Technical Analysis
February 15, 2006

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TECHNICAL ANALYSIS

The Division derives its authority from the Surface Mining Control and Reclamation Act of 1977(SMCRA). When companies submit a Permit Application Package or an amendment to their Mining and Reclamation Plan, the Division reviews the proposal for conformance to the R645-Coal Mining Rules. This Technical Analysis is such a review. Regardless of these analyses, the Permittee must comply with the minimum regulatory requirements as established by SMCRA.

Readers of this document must be aware that the regulatory requirements are included by reference. A complete and current copy of these regulations and a copy of the Technical Analysis and Findings Review Guide can be found at http://ogm.utah.gov/coal

This Technical Analysis (TA) is written as part of the permit review process. It documents the Findings that the Division has made to date regarding the application for a permit and is the basis for permitting decisions with regard to the application. The TA is broken down into logical section headings that comprise the necessary components of an application. Each section is analyzed and specific findings are then provided which indicate whether or not the application is in compliance with the requirements.

INTRODUCTION

On May 5, 2005, the Permittee submitted an application for Phase I bond release for the Gravel Canyon area of the Willow Creek Mine. The Gravel Canyon area contains 5.75 acres of which 4.3 acres as a barrow pit before the site was permitted under SMCRA. The site is located in SE1/4SE1/4 of Section 35, Township 12 South, Range 9 East, SLB&M, Utah. The Permittee reclaimed the site in the fall of 2004.

INTRODUCTION

RECLAMATION PLAN

APPROXIMATE ORIGINAL CONTOUR RESTORATION

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

Analysis:

The Permittee meet the requirements to restore the site to the approximate original contours. Those requirements are a combination of performance standards for backfilling and grading, hydrology, postmining land use and revegetation. The performance standards include:

- Minimization off-site impacts.
- The final surface configuration closely resembles the general surface configuration of the land prior to mining.
- The topsoil/growth media are adequate to support the vegetation requirements.
- Erosion is minimized.
- The land is able to support the approved postmining land use.

The intent of the approximate original contour regulations is not to restore a site to the approximate premining elevation. Rather the intention of the regulations are to ensure that the reclaimed site has slope lengths and gradients that are within acceptable limits and similar to those in the surrounding areas.

Regulatory requirements that must be achieved include:

- Eliminate all highwalls, no highwalls existed at Gravel Canyon.
- Eliminate all spoil piles, no spoil piles existed at Gravel Canyon.
- Eliminate all depressions with the exception of small depressions needed to retain moisture, minimize erosion, create and enhance wildlife habitat or assist revegetation. No depressions except pocks remain on the site.
- Minimize erosion and water pollution both on and off site. The Permittee met all hydrology requirements.
- Support the postmining land use. The site is capable of supporting the postmining land use.

Exhibit 3.6-5AB provides reclamation topography and cross-section locations. The Permittee met the minimum requirements for achieving AOC because:

- There are no depressions at the site except for small depressions (pocks). The pocks are part of a standard surface roughening methods used to control erosion and water pollution.
- The slopes were reclaimed according to the approved reclamation plan
- The plan minimizes erosion and water pollution.
- The Division expects that the reclaimed site will support the postmining land use of grazing and wildlife habitat because the slopes blend with the surrounding area and the area was seeded.

Findings:

The information in the amendment is adequate to meet the minimum requirements of this section of the regulations.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

General

The Permittee meet the general backfilling and grading requirements because:

- The area was reclaimed to the approximate original contour requirements. See the Approximate Original Contour section of the TA for details.
- The reclaimed slopes have a safety factor of 1.3 or greater and do not exceed the angle of repose. See Exhibit 3.6-5AB for as-built certifications.
- The Permittee reclaimed the site using surface roughening techniques (pocking). Pocking is an effective means to control erosion and water pollution.

Previously Mined Areas

The R645 Rules allow the Division to enforce different standards to pre-SMCRA disturbed sites if highwalls or spoil piles are present. Since there are no highwalls or spoil piles associated with the substation area those rules do no apply for that area.

Findings:

The information in the amendment is adequate to meet the minimum requirements of this section of the regulations.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Redistribution

The Permittee met the topsoil and subsoil requirements for Phase I bond release. Post mining topography is shown on Exhibit 3.6-5AB. MRP Table 3.6-6, Option B, describes the mass balance summary for reclamation. Approximately 65,000 yd^3 of material was moved during regrading (App. 3.6D Sec. 3.6-4AB). Composite soil samples of the final graded surface were determined to be suitable for use as substitute topsoil (MRP, App. 3.4M).

The rip rap in the ephemeral channel was filled in with soil and seeded and mulched as described in the Earthfax Engineering reclamation filter design (MRP, Sec. 3.6, App. 3.6B).

Findings:

The information provided meets the minimum Topsoil and Subsoil requirements for Phase I bond release.

MINE OPENINGS

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Analysis:

There are no mine openings associated with the Gravel Canyon area.

Findings:

The information in the amendment is adequate to meet the minimum requirements of this section of the regulations.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

Analysis:

Hydrologic Reclamation Plan

The Permittee met the requirements for establishing the hydrological structures needed to for Phase I bond release. There will be one reclaim channel at Gravel Canyon. Since the channel in Gravel Canyon is ephemeral, the Permittee designed the reclamation channel to safely pass a 10-year 6-hour storm with a minimum freeboard of 1 foot. The 10-year 6-hour storm for this area is 1.4 inches. The channel will be 3-feet wide at the bottom and 1.5-feet deep with 3:1 side slopes. The D_{50} riprap size is 4 inches.

The filter blanket and riprap design is in Appendix 3.6B. The filter blanket will be a 6-inch thick layer of UDOT 1" base mix; the Permittee will not use a synthetic fabric.

The Permittee used several measures to control sediment during reclamation:

- Placement/redistribution of topsoil.
- Mulching.
- Deep gouging.
- Seeding.
- Tackifying.

The Permittee performed Modified Universal Soil Loss Equation (MUSLE) calculations, which show that pre-mining conditions would have yielded 24.2 tons/acre/yr of sediment, while the site will yield just 0.14 tons/acre/yr immediately post-reclamation and 20.7 tons/acre/yr long-term post-reclamation.

Findings:

Information provided in the application is adequate to meet the minimum Hydrologic Reclamation Plan requirements of the regulations.

STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

Analysis:

The Permittee met the minimum stabilization of surface areas requirements for Phase I bond release. Two T /ac. of hay was scattered on the regraded surface. The hay was incorporated with gouging. Seed was broadcast over the site (MRP, Table 5.3-2b, Sec 5.3). Following the seeding, the site received an additional 1 to 1.5 tons per acre of straw much applied with mechanical blowers and then was sprayed with a hydromulch and tackifier at a rate of 500 lbs per acre (App 3.6 Sec 3.6-4(1)AB). The rip-rapped channel bottom was covered with soil and seeded and mulched as well.

After seeding and mulching, App. 3.6-C demonstrates, the amount of sediment estimated to leave the site drops to .14 Tons/acre/year. The field visit on September 8, 2005 confirmed that the Permittee has applied best management practices to control erosion and prevent sediments from leaving the site.

Findings:

The information provided in the bond release application meets the bond release regulations.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Affected Area Boundary Maps

The affected area will not change because of the modification to the reclamation plan for Gravel Canyon.

Bonded Area Map

The bonded area will not change because of the modification to the reclamation plan for Gravel Canyon.

Reclamation Backfilling And Grading Maps

Exhibits 3.4-10 and 3.4-10a provide cross sections and Exhibit 3.4-12 provides station locations for the profile of Gravel Canyon drainage under reclamation Option A.

Exhibits 3.4-10 and 3.4-10a provide cross sections and Exhibit 3.4-12 provides station locations for the profile of the Gravel Canyon drainage under reclamation Option A.

Exhibit 3.6-4 (revised 08/23/04) illustrates the reclamation contours and cross-sections for Options B and C being proposed that would leave more soil material in the canyon. This exhibit presents cross-sections, and profiles of the proposed drainage configurations. Mr. Layne Jensen, a P.E. registered in the State of Utah prepared the map and certified it properly.

The Permittee indicated in a letter dated March 19, 2004 to Daron Haddock that an as-built topography map will be created from aerial photography of Gravel Canyon and the Willow Creek Mine site.

Reclamation Facilities Maps

No facilities were associated with the reclamation of the Gravel Canyon site.

Final Surface Configuration Maps

Exhibit 3.6-4 shows Scenario B and C for the reclamation of Gravel Canyon. Scenario A is shown in Exhibits 3.4-10 and 3.4-10a of the MRP. Exhibit 3.4-12 provides station locations for the profile of Gravel Canyon drainage under reclamation Option A.

Reclamation Monitoring And Sampling Location Maps

The Permittee indicated in a letter dated March 19, 2004 to Daron Haddock that an as-built topography map will be created from aerial photography of Gravel Canyon and the Willow Creek Mine site. Soil sampling locations should be indicated on the As-Built to document the sampling effort.

Certification Requirements.

Layne Jensen certified the revised reclamation maps for Gravel Canyon. He is a registered profession engineer.

Findings:

The information provided meets the requirements of the Regulations.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

General

The Permittee address the general procedures for bond release as follows:

- The Permittee described the area for which Phase I bond release is being sought as on 5.75 acres of which 4.3 acres were disturbed pre-SMCRA acres in SE1/4SE1/4 of Section 35, Township 12 South, Range 9 East, SLB&M, Utah.
- The Permittee provided as built drawing Exhibit 3.6-5AB that shows acreage of disturbed areas in Gravel Canyon topsoil storage site.
- Exhibit 3.6-5AB provides dates of completion for the reclamation work and status of bond release.
- The Permittee included a brief history of the mining and reclamation activities.
- There were no ponds within the substation area. The Permittee used surface roughening techniques, such as pocking for sediment control.
- The Permittee requested that the designated part of the bond for Gravel Canyon, which is $159,000, be reduce to $95,400. The Permittee is seeking a 60% bond reduction, which is the maximum allowed under R645-301-880.310.

Determination of Bond Amount

The current bond for the Willow Creek Mine is $7,866,000, of which $159,000 is for reclaiming Gravel Canyon. The Permittee requested that 60% ($95,400) of the bond for Gravel Canyon be released. After Phase I Bond release, the Division will have $63,600 to finish reclamation of the Gravel Canyon site. The only remaining reclamation activity is vegetation. The Division is confident that they can complete reclamation with $63,600 ($11,000/acres.)

Findings:

The information in the amendment is adequate to meet the minimum requirements of this section of the regulations.

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